

CHAPTER 8

CB HEAD HARNESS P/N 1774AS601-20

Section 8-1. Description

8-1. GENERAL.

8-2. The CB Head Harness (P/N 1774AS601-20) (figure 8-1) is a fabricated assembly that serves as a solution for non-helmeted mask retention. It is used with the A/P22P-14(V) Chemical Protective Respirator Assembly. The CB Head Harness is a fully adjustable webbing system that is worn on the head. One size can accommodate all head sizes.

helmet, the CB Head Harness may be used as an alternative for mask retention. Proper mask retention is required to ensure safe breathing operation and to maximize field of view. The CB Head Harness is donned along with the respirator assembly and is connected to the respirator's mask retention straps. When properly fitted and adjusted, the CB Head Harness comfortably accommodates any aviator without adversely affecting hearing performance.

8-3. CONFIGURATION.

8-4. The CB Head Harness is a webbing and hardware assembly. Adjustable head and nape straps allow it to be fully adjustable. The CB Head Harness can be fabricated at any fleet level maintenance shop. When there are no other requirements for the aircrew

8-5. APPLICATION.

8-6. The CB Head Harness is intended for use by non-helmeted patrol/cargo aircrewmembers equipped with the A/P22P-14(V) Series Respirator Assembly who are operating P-3, C-130, C-9, C-20, and C-40 aircraft.

Section 8-2. Modifications

8-7. GENERAL.

8-8. There are no modifications authorized for the CB Head Harness.

Section 8-3. Fitting and Donning

8-9. FITTING OF CB HEAD HARNESS.

8-10. The CB Head Harness is designed to fit all head sizes. By adjusting the webbing and buckles, the head harness may be adapted to accommodate any aircrewmember. To fit the CB Head Harness, proceed as follows:

1. The aircrewmember should don the A/P22P-14(V) respirator assembly.

2. Place the head harness on the back of the head over the respirator hood with the hook and pile fastener on the top and the webbing and buckles across the back of the neck.

3. The side panels should go over the ears and the top hook and pile fastener should be undone.

4. Snap the mask retention straps to the head harness and ensure the toggle harness terminals are in the shortest position.

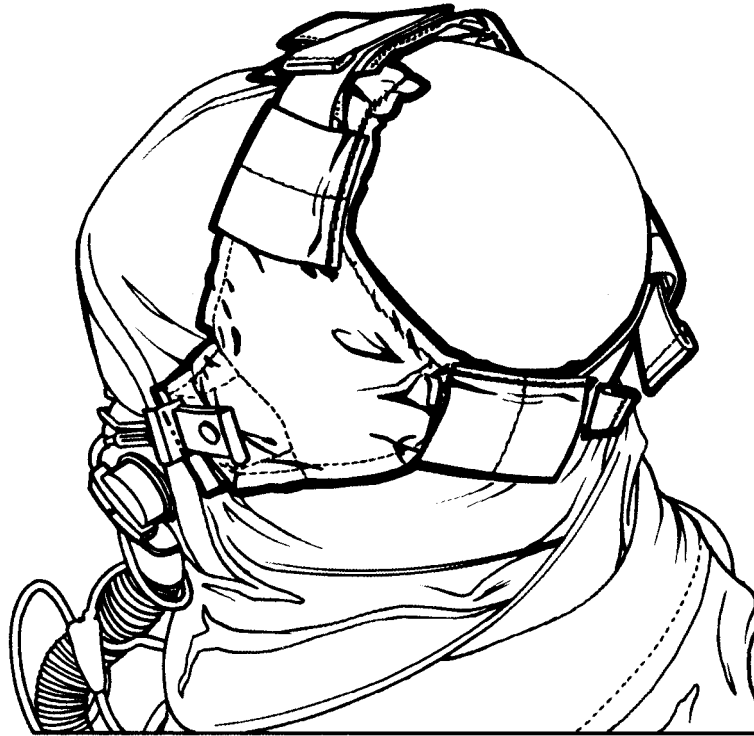


Figure 8-1. CB Head Harness

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5. The V bow should be in the down position.
6. Adjust hook and pile fastener on top of head for comfortable fit.

7. Tighten the webbing behind the neck until there is a good seal around the oral nasal mask. Mark the position around the buckles. Remove the head harness.

8. Double the webbing back through the buckles and tack the straps in place with size E thread.

8-11. DONNING PROCEDURES WITH CB HEAD HARNESS.

8-12. Donning procedures of the Respirator Assembly if using the CB Head Harness shall be in accordance

with the instructions contained in paragraph 5A-27, except that the CB Head Harness is used in lieu of the aircrew helmet. Unique head harness donning procedures include:

1. Instead of placing the flight helmet on the head over respirator assembly's hood, place the CB Head Harness on back of head with the hook and pile fastener on top and webbing on the back of the neck.

2. An assistant will ensure rolled webbing of the head harness is between the respirator hood and the metal toggles when attaching the snaps.

3. For proper retention of the head harness, ensure the adjustment sleeves are in the shortest positions.

Section 8-4. Maintenance

8-13. GENERAL.

8-14. Repairs or other maintenance actions required shall be performed by organizational level or above. All maintenance actions and inspections shall be recorded on the appropriate form in accordance with OPNAVINST 4790.2 Series.

8-15. FABRICATION OF THE CB HEAD HARNESS.

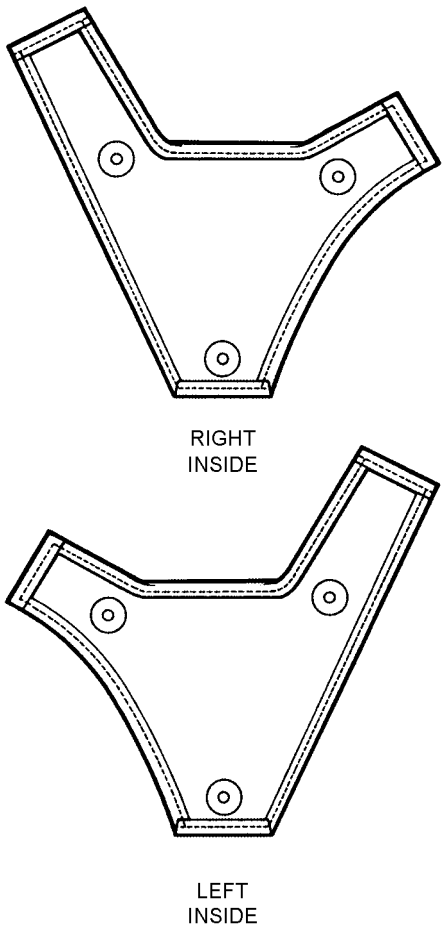
8-16. To fabricate the CB Head Harness, proceed as follows:

Materials Required		
Quantity	Description	Reference Number
1	Head Harness Pattern, Left/Right	Figure 8-2
As Required	Cloth, Nylon Duck	NIIN 00-765-2863
As Required	Webbing, Nylon, Type XII	NIIN 00-281-3012
As Required	Webbing, Nylon, Type VIII	NIIN 00-261-8585
As Required	Webbing, Nylon, Type IV	NIIN 00-655-5123
As Required	Thread, Nylon, Size E	NIIN 00-204-3884
As Required	Fastener Tape, Hook, 2 Inch	NIIN 00-450-9837
As Required	Fastener Tape, Hook, 1 Inch	NIIN 00-106-5973
As Required	Fastener Tape, Pile, 1 Inch	NIIN 00-106-5974
6	Fastener, Snap Stud	NIIN 00-276-4908
6	Fastener, Snap Eyelet	NIIN 00-276-4978
4	Fastener, Snap Cap	NIIN 00-891-9073
4	Fastener, Snap Socket	NIIN 00-945-2577
4	Buckle	MS51940-95, NIIN 00-664-6395

NOTE

All stitching shall be with size E nylon thread, 8 to 10 stitches per inch, conforming to ASTM-D-6193 stitch Type 301. Backstitching or overstitching will be a minimum 3/4 inch. All nylon fabric and webbing shall be heat sear cut. The restraint system pattern is a left side and right side pattern marked accordingly.

1. Prepare head harness pattern #1 in accordance with Figure 8-2.
2. Position head harness pattern #1 onto the nylon duck cloth. Trace pattern and mark snap locations for each side and cut out each piece. Cut inside corners 1/8 inch inboard if needed to create flat folds.
3. Fold all edges 3/8 inch, sew in place using one row of stitches 1/4 inch from folded edge. At locations marked, set snap studs and eyelets.



Step 3 - Para 8-16

8p16s03

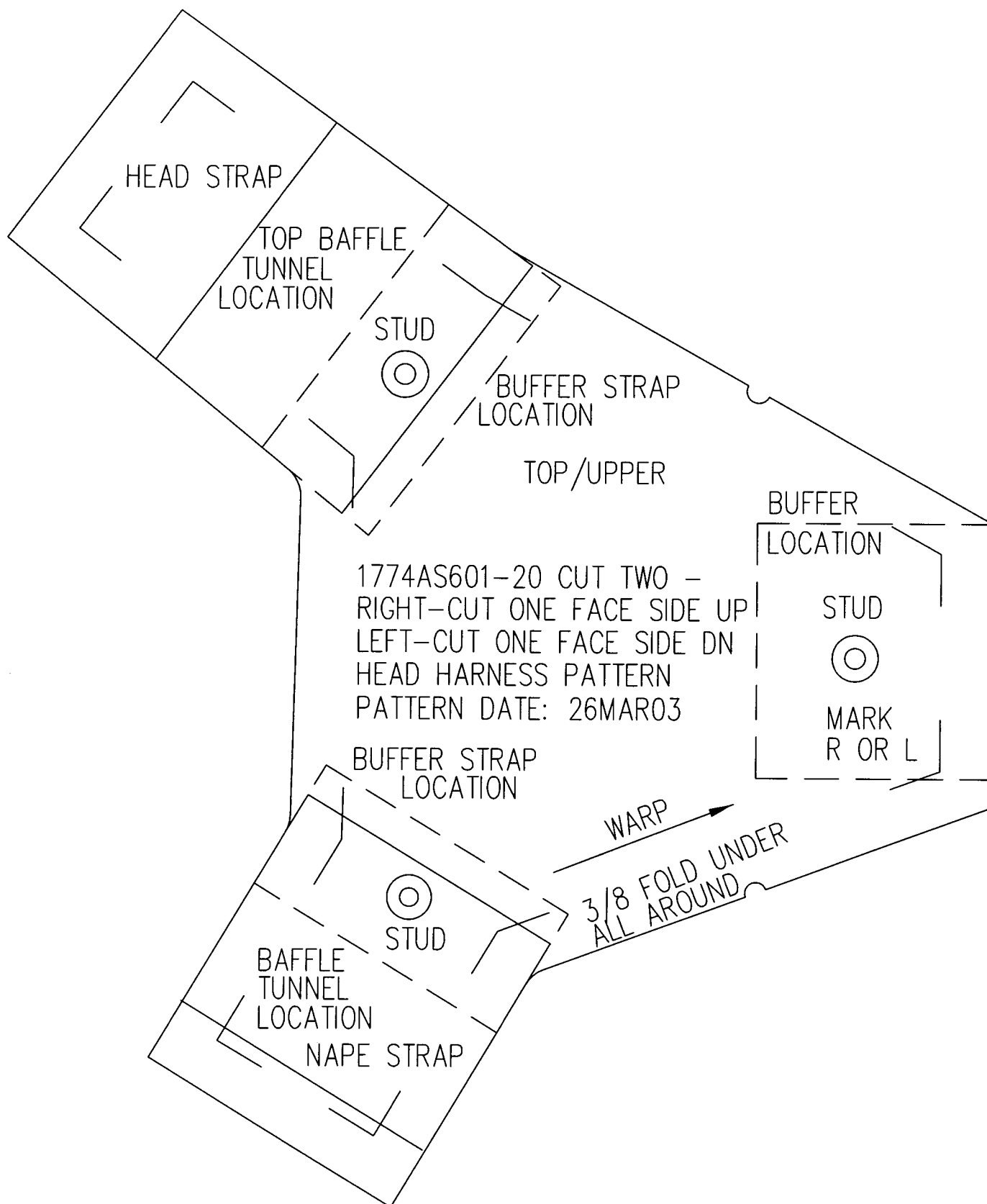
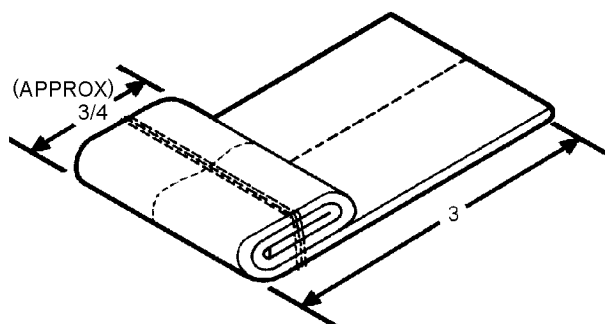


Figure 8-2. Head Harness Pattern

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4. Measure and cut two pieces of Type VIII webbing 7 1/4 inches, four pieces of Type XII webbing 2 3/4 inches, and four pieces of Type IV webbing 1 3/4 inches long.

5. To create the swivel link buffer strip, fold one end of Type VIII webbing 3/4 inch four times. Adjust folds so that overall finished length measurement of webbing is 3 inches. Sew folds in place using 3 rows of stitches side by side centered.



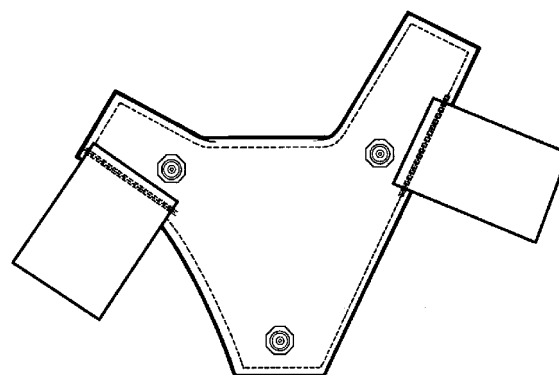
Step 5 - Para 8-16

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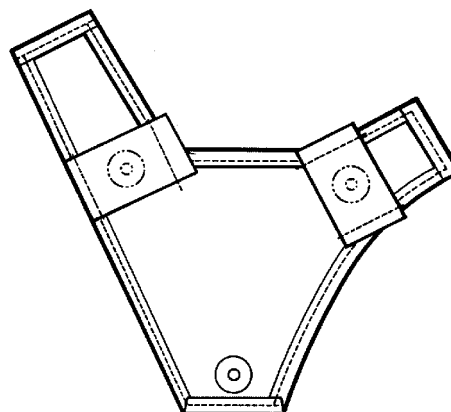
NOTE

Protect the Bromo-Butyl rubber hood material from chafing with restraint metal parts. If needed adjust or position the buffer webbings and baffle tunnels when sewing in place.

6. Position Type IV snap eyelet buffer webbing pieces in place onto the head and neck strap wings. Sew webbing in place using one row of stitches 3/8 inch from edge.



OUTSIDE
RIGHT



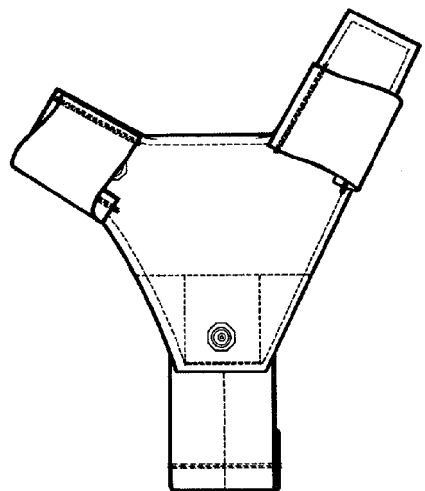
INSIDE
RIGHT

Step 6 - Para 8-16

8p16s06

7. To create the baffle tunnels, fold then sew the Type XII webbing in place onto the head and neck strap wings.

8. Sew link buffer strips in place.



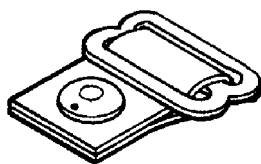
OUTSIDE
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Steps 7 and 8 - Para 8-16

8p16s07

9. Cut four pieces of Type IV webbing 2 3/4 inches long. Reeve webbing around center bar of buckle and fold in half. With cut ends even, measure inboard from cut end 1/2 inch, center and cut hole. Set snap socket with lock lug towards center bar and dot on cap towards the cut edges. Repeat procedure for each buckle.

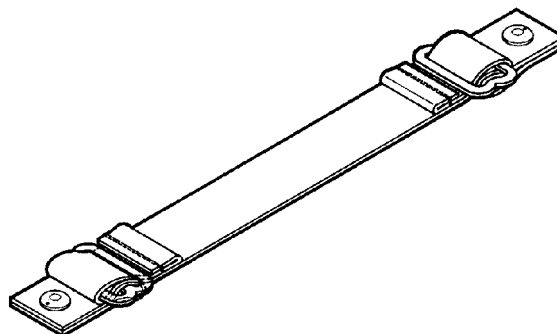


Step 9 - Para 8-16

8p16s09

10. Cut one piece of Type IV webbing 11 1/2 inches long to create nape strap webbing. Fold ends over 1/2 inch and sew in place using 3 rows of stitches side by side.

11. Reeve webbing through outside bars of buckle; fold end back and reeve through the outside bar of buckle. Repeat for other end of webbing.



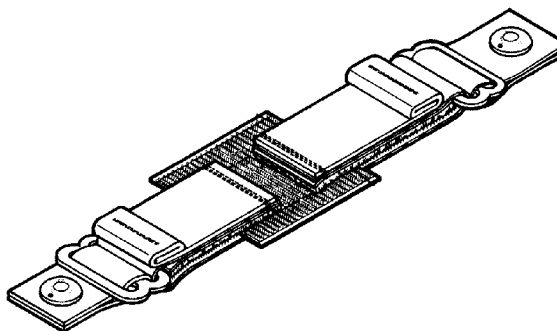
8p16s11

Step 11 - Para 8-16

12. Cut one piece of 1-inch wide hook fastener tape 12 inches long, one piece of 2-inch wide hook tape 2 inches long, two pieces of 1-inch wide pile tape 2 inches long, and two pieces of Type IV webbing 2 3/4 inches long.

13. Position 2-inch x 2-inch hook tape centered on the 12-inch piece of hook tape. With hooks facing up on both tapes. Sew together using a box stitch 1/8 inch inboard on all edges. With hooks up, place one 2-inch piece of pile tape with loops up on each end of the 12-inch hook tape and sew in place using a box stitch 1/8 inch inboard on all edges.

14. Fold one end of Type IV webbing 3/8 inch 2 times. Sew fold in place using 3 rows of stitches side by side centered. Position snap strap buckles with snap caps up and outside bar of buckle towards cap. With hooks facing up, reeve the ends through and around inside bar of buckle. Re-position head strap assembly with hooks facing down and buckles against 2-inch x 2-inch hook tape. At each end, place prepared Type IV webbing on to hook tape with cut ends even and folds up. Sew ends together with 3 rows of stitches side-by-side 1/4 inch from edge.



8p16s13

Steps 13 and 14 - Para 8-16

15. Snap the head strap and nape strap onto head harness side pieces. Adjust straps to aircrewmember when donning system. Mark and tack neck straps if needed using E thread double two turns tied off with surgeon's knot followed by a square knot.



8p16s15

Step 15 - Para 8-16

8-17. INSPECTION.

8-18. Inspection is limited to visual inspection. No functional checks for the CB Head Harness are required. The CB Head Harness shall be inspected at intervals coinciding with the A/P22P-14(V) respirator assembly inspections stated in Chapter 4. Verify condition of head harness vest by performing the following tasks:

1. Inspect webbing for cuts, tears, fraying, and contamination.

- 2. Inspect stitching for security.
- 3. Inspect hook and pile tape for damage and security.
- 4. Inspect hardware for security, corrosion, dents, burrs, distortion, sharp edges, and, if applicable, ease of operation.
- 5. Inspect buckles and straps of headstrap assembly for security of attachment, deterioration, cuts, and proper operation and adjustment.

8-19. CLEANING.

8-20. To clean a CB Head Harness, proceed as follows:

Materials Required		
Quantity	Description	Reference Number
As Required	Detergent, Laundry	Commercial
1. Mix a proper strength solution of detergent using detergent manufacturer's recommendation.		
2. Immerse head harness in solution and allow to soak for five minutes. Agitate gently for two minutes. Drain, do not wring.		
3. Rinse harness in cool, fresh water until all traces of detergent are gone.		
4. Hang harness in a dry, well-ventilated area until dry.		

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